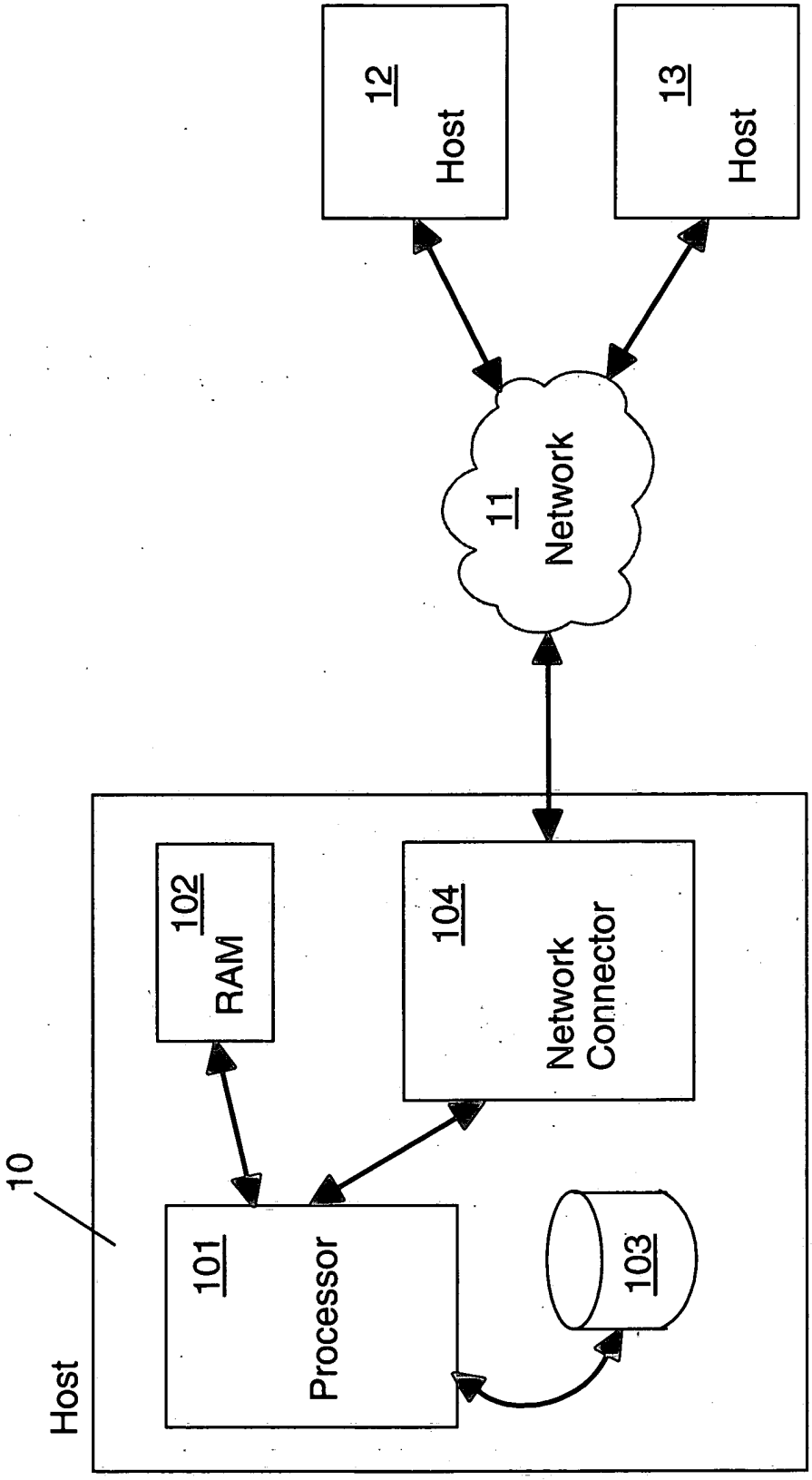
12
Host
13
Host
11
Network
102
RAM
104
Network
Connector
10
101
Processor
103
Host

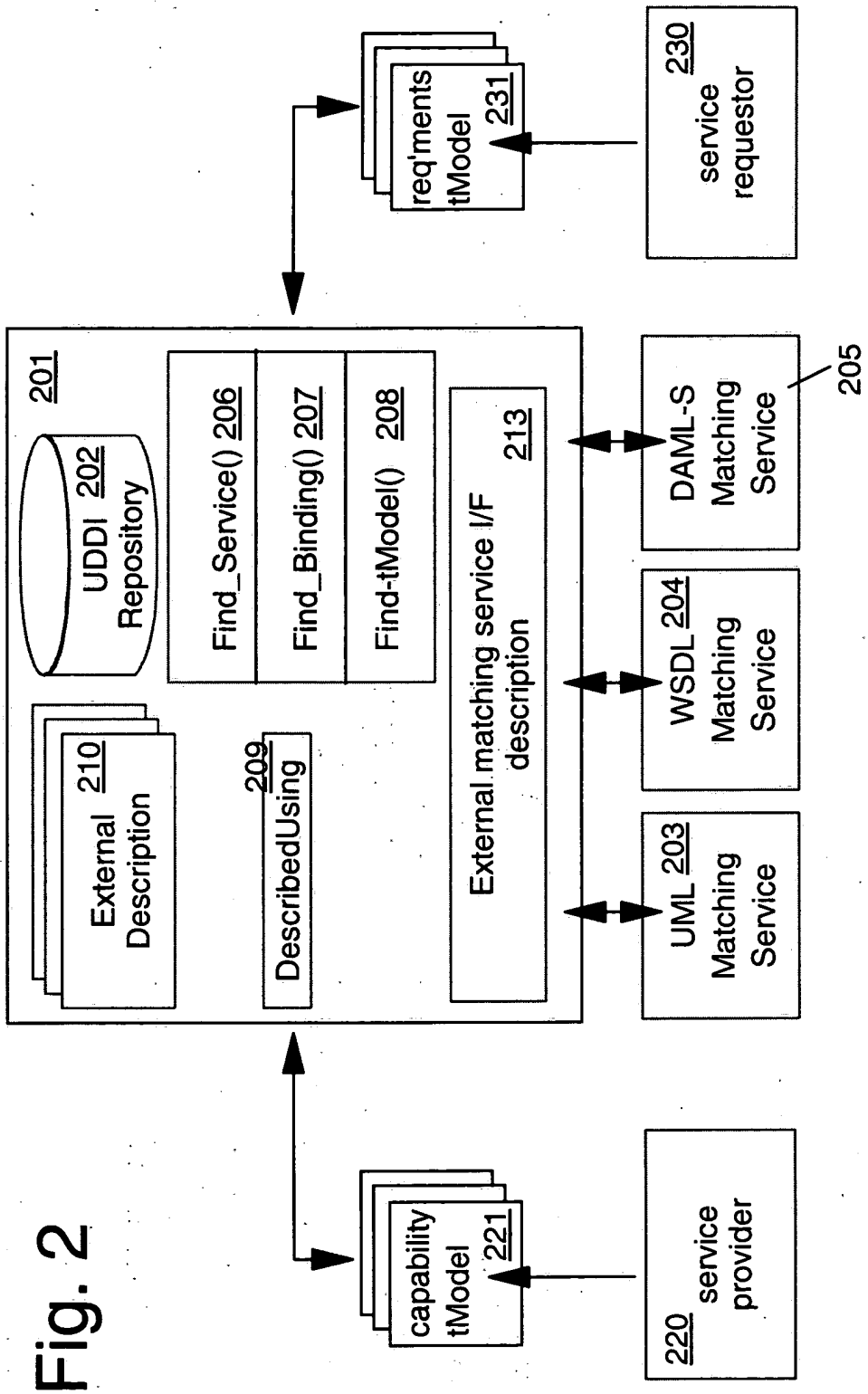
req'ments tModel 231
230 service requestor
201
UDDI 202 Repository
Find_Service() 206
Find_Binding() 207
Find-tModel() 208
External Description 210
DescribedUsing 209
External matching service I/F description 213
DAML-S Matching Service
205
WSDL 204 Matching Service
UML 203 Matching Service
capability tModel 221
220 service provider

Fig. 2

```
<!-- A T-Model that is used to categorize a tModel by/with a particular external description type/format. -->
<!-- This is a canonical categorization scheme T-Model for categorizing service providers external service
capability descriptions -->                                                                    302

<tModel authorizedName=" " operator="..." tModelKey="UUID:205B16DD-078E-4EB5-81A4-3FE628E00D4B">
        <name>urn:x-ibm:DescribedUsing</name>                                          301
        <description xml:lang="en"> Used to categorize a tModel by/with a particular external description type/format.
</description>

        <overviewDoc>
                <description xml:lang="en"> This URL should point to a web page that has a list of potential markup
languages that can be used to describe business services. </description>
                <overviewURL> http://localhost/semanticuddi </overviewURL>
        </overviewDoc>                                                                 303

        <categoryBag>
        <keyedReference
                tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
                keyName="types"
304             keyValue="categorization"/>
        </categoryBag>

</tModel>                                                                              209
```

Fig. 3

```
<!-- A T-Model that represents DAML-S as an external description type -->
<tModel authorizedName=" " operator="..." tModelKey="UUID:2AFD231E-1DD0-4451-9E03-0D6D2CF11308">
        <name>urn:x-ibm:ExternalDescription:DAML-S</name>
        <description xml:lang="en"> Used to represent DAML-s as an external description type. </description>

        <overviewDoc>
                <description xml:lang="en"> This URL points to the profile specification of DAML-S </description>
                <overviewURL> http://www.daml.org/services/daml-s/2001/05/Profile.daml </overviewURL>
        </overviewDoc>

        <categoryBag>
        <keyedReference
                tModelKey="uuid:A035A07C-F362-44DD-8F95-E2B134BF43B4"
                keyName="externalDescription"
                keyValue="true"/>
        </categoryBag>

</tModel>
```

402

401

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404

210

Fig. 4

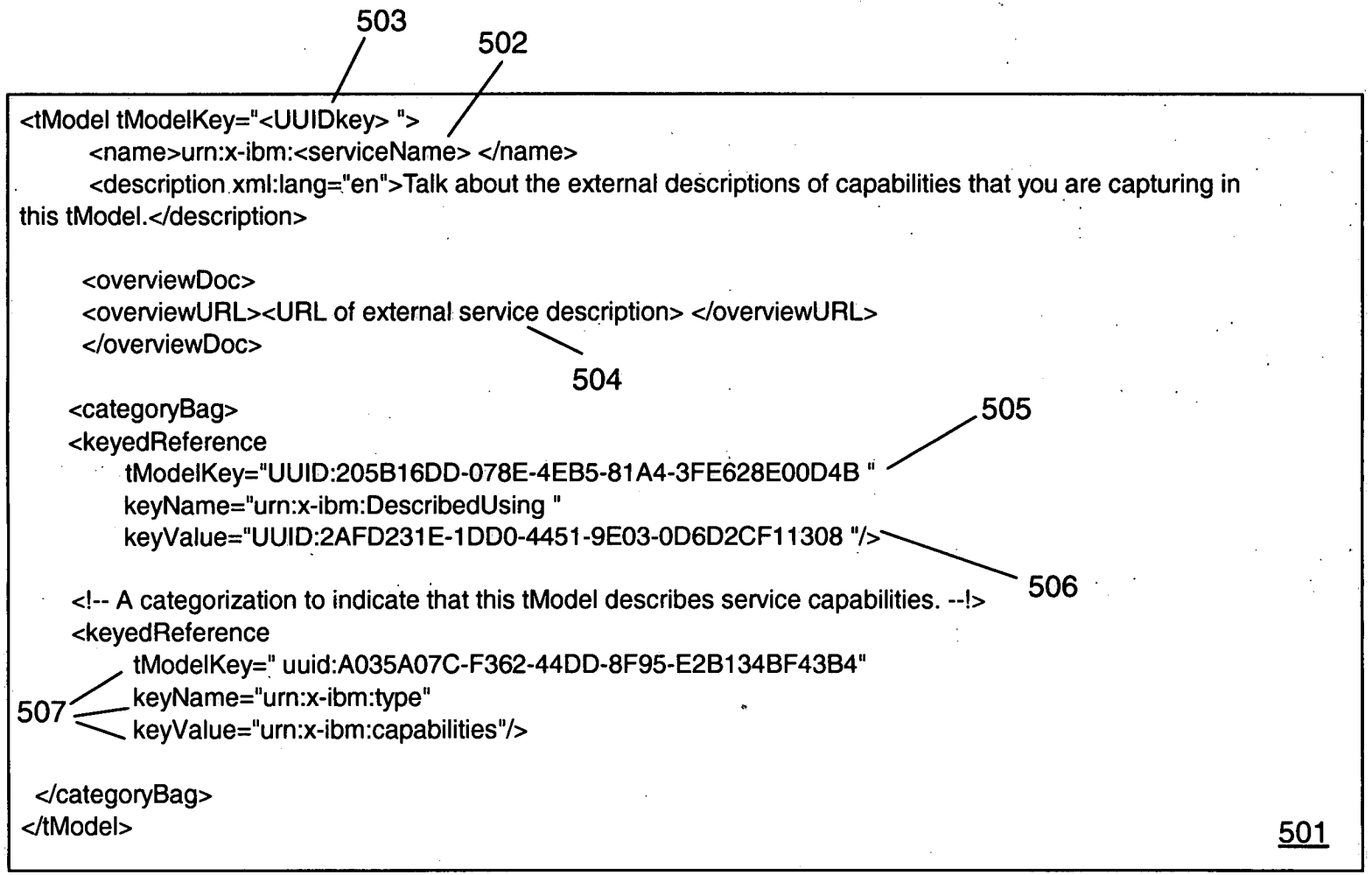
503
502
<tModel tModelKey="<UUIDkey> ">
<name>urn:x-ibm:<serviceName> </name>
<description xml:lang="en">Talk about the external descriptions of capabilities that you are capturing in this tModel.</description>
<overviewDoc>
<overviewURL><URL of external service description> </overviewURL>
</overviewDoc>
504
<categoryBag>
505
<keyedReference
tModelKey="UUID:205B16DD-078E-4EB5-81A4-3FE628E00D4B "
keyName="urn:x-ibm:DescribedUsing "
keyValue="UUID:2AFD231E-1DD0-4451-9E03-0D6D2CF11308 "/>
506
<!-- A categorization to indicate that this tModel describes service capabilities. --!>
<keyedReference
tModelKey=" uuid:A035A07C-F362-44DD-8F95-E2B134BF43B4"
507
keyName="urn:x-ibm:type"
keyValue="urn:x-ibm:capabilities"/>
</categoryBag>
</tModel>
501

Fig. 5

```
<tModel  operator="..." tModelKey="<UUIDKey> ">                                    603
        <name>urn:x-ibm:<client service Name> </name>                              602
        <description xml:lang="en"> A tModel to reference the external description of client's service request
</description>

        <overviewDoc>
                <description xml:lang="en"> This URL points to the external service description of client's request.
</description>
                <overviewURL> URL points to the external service description of client's request.>/overviewURL>
        </overviewDoc>                                                             604

        <categoryBag>
        <keyedReference
                tModelKey="uuid: 205B16DD-078E-4EB5-81A4-3FE628E00D4B"             605
                keyName="urn:x-ibm:DescribedUsing"
                keyValue="uuid:2AFD231E-1DD0-4451-9E03-0D6D2CF11308"/>             606

<!-- A categorization to indicate that this tModel describes service requirements. à
         <keyedReference
                tModelKey=" uuid:A035A07C-F362-44DD-8F95-E2B134BF43B4"                    601
 607            keyName="urn:x-ibm:type"
                keyValue="urn:x-ibm:requirements"/>
        </categoryBag>

</tModel>
```

Fig. 6

```
<!-- A canonical categorization scheme T-Model for categorizing service requesters external request descriptions
-->
<tModel  operator="..." tModelKey="UUID:2C232168-1A1A-4C4D-BA39-0EA0315827E0">
        <name>urn:x-ibm:ClientRequirementsCatergorisationTmodel</name>
        <description xml:lang="en"> Used in a find_tModel call to pass a client tModel that refers to an external
description that is to be matched. </description>

        <overviewDoc>
                <description xml:lang="en"> This URL points to a web page that describes new categorization for
client requirements  </description>
                <overviewURL> http://localhost/semanticuddi </overviewURL>
        </overviewDoc>

        <categoryBag>
        <keyedReference
                tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
                keyName="types"
                keyValue="categorization"/>
        </categoryBag>
</tModel>
```

703

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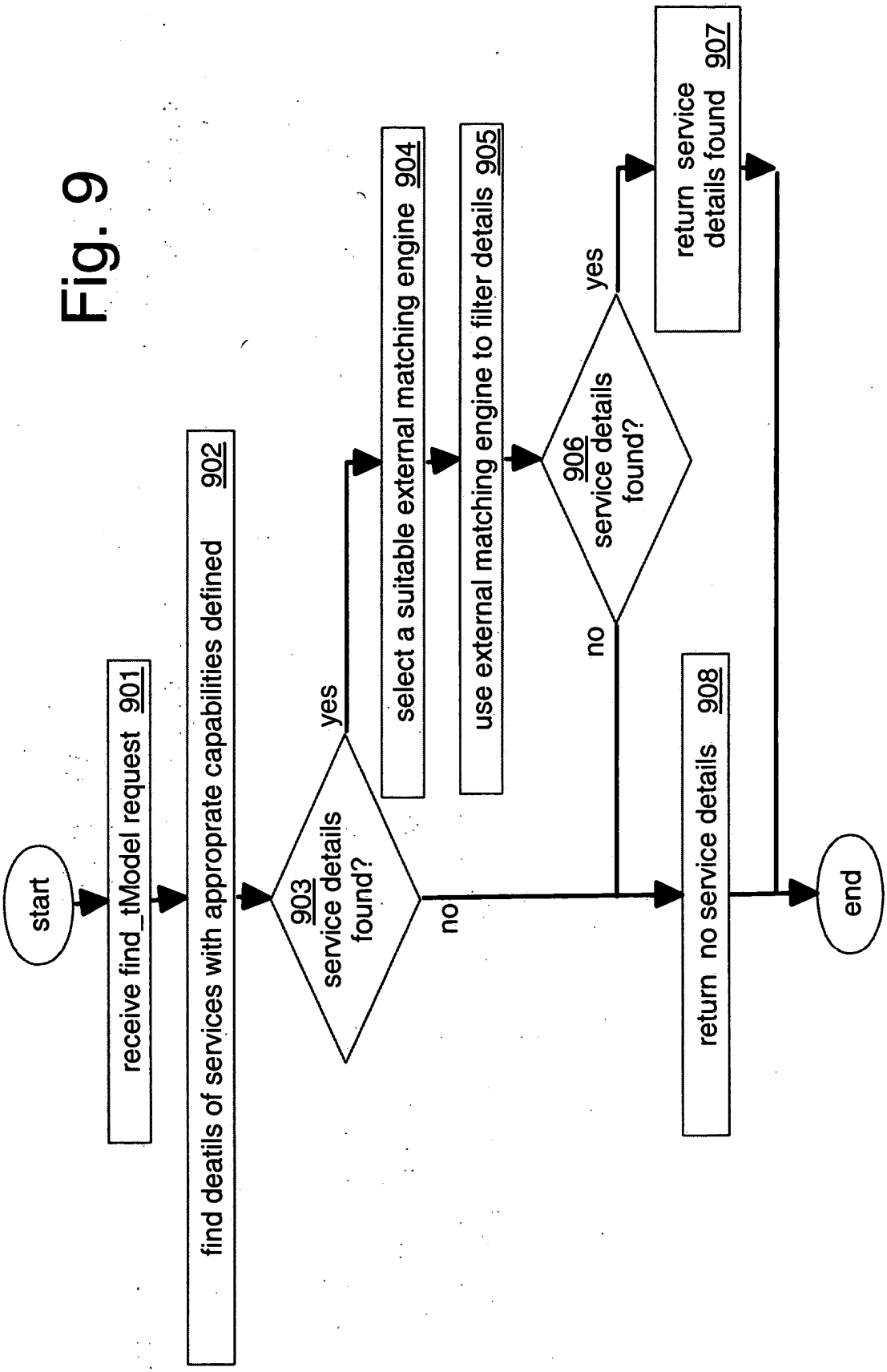
Fig. 7

```
<!-- A T-Model that defines the interface for External Matching Service -->
<tModel authorizedName=" " operator="..." tModelKey="<UUIDKey>">
        <name><External Matching Service Interface Name></name>
        <description xml:lang="en"> Represents the interface to an external matching service </description>

        <overviewDoc>
                <description xml:lang="en"> This URL points to the standardized interface for invoking external
matches from UDDI Server </description>
                <overviewURL> <URL of External Matching Service WSDL interface document> </overviewURL>
        </overviewDoc>

        <categoryBag>
        <keyedReference
                tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
                keyName="uddi-org:types"
                keyValue="wsdlSpec"/>
        </categoryBag>
</tModel>
```

803 802 804 805 801

Fig. 8

Fig. 9


start
receive find_tModel request 901
find deatils of services with approprate capabilities defined 902
903 service details found?
yes
no
select a suitable external matching engine 904
use external matching engine to filter details 905
906 service details found?
yes
no
return service details found 907
return no service details 908
end